

NEW SPECIES OF CRYPTADIUS FROM TEXAS AND SONORA  
(COLEOPTERA: TENEBRIONIDAE)

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ABSTRACT—*Cryptadius triplehorni* n. sp. is described from Big Bend National Park, Texas, U.S.A. and *C. sonorae* n. sp., from 2 localities in Sonora, Mexico. These are the first records of *Cryptadius* species occurring outside the maritime regions of California and Baja California and the first record of a species from the continental interior.

*Cryptadius inflatus* was described by LeConte (1951) as a new genus and species from San Diego, California. The genus remained monotypic until 1907, when Casey described *C. oviformis*, *C. punctipennis*, and *C. curvipes*, all from Southern California. Blaisdell described *C. angulatus*, *C. sinuatus*, and *C. tarsalis* from Baja California in 1923 and reviewed the species from Baja California in 1943. All of the above species have coarse, dense punctures or punctato-scabrous sculpturing on the fronto-vertex area. The following describes two new species, one which lacks coarse punctures on the fronto-vertex and occurs in the interior of continental North America, and another which has coarse punctures on the fronto-vertex and occurs along the coast of the Gulf of California in Sonora, Mexico.

*Cryptadius triplehorni* Berry, new species

Male (holotype): Dull, light castaneous, strongly oval (fig. 6), dorsum strongly convex, length 4.6 mm, width 3.0 mm.

Head with genae distinctly entering eyes; punctures minute and dense on fronto-vertex (fig. 1). Pronotum broadly convex laterally, front edge acutely angled and slightly produced anteriorly, base nearly straight across; basal angles slightly obtuse, abruptly angled; base subequal in width to base of elytra; punctures minute, round, dense, and shallow in middle  $\frac{1}{3}$ , becoming oblique and distinctly, minutely granulate in lateral  $\frac{1}{3}$ ; granules round to oval. Pronotum with moderately dense, minute setae in lateral  $\frac{1}{3}$  and a few moderately long setae on lateral edge; with moderately dense patch of elongate setae directly behind and reaching the eyes. Prosternum densely, minutely punctato-granulate, granules obscuring indistinct punctures. Ventral pronotum with small, elongate granules laterally and elongate, longitudinal rugae mesally; sparsely clothed with elongate setae. Elytra strongly convex laterally; with punctures subobsolete near base, minute and dense on disc, oblique and with minute oblong granules in lateral  $\frac{1}{3}$  and in apical  $\frac{1}{2}$ ; with sparse, short, erect setae in lateral  $\frac{1}{3}$ . Scutellum barely visible, pointed, forming acute notch at base of suture (fig. 6). Epipleuron with moderately dense, rounded granules, evenly distributed, each associated with elongate seta (fig. 4); many epipleural setae longer than width of epipleuron. Mesosternum with median process touching and

slightly overlapping anterior margin of metasternum; with dense minute punctures. Metasternum with punctures minute, moderately dense, oblique, and shallow. Abdominal sterna with moderately dense, oblique, shallow punctures on sterna 1-3; punctures larger, dense, deep, and rounded on sterna 4 and 5. Tegmen (fig. 3) with apicale narrow, cylindrical, and acutely pointed; dorsum, in lateral view broadly, longitudinally convex. Penis acute at apex.

Female (allotype): Agrees with the description of the holotype except in size and genitalia. Length 5.1 mm, width 3.3 mm.

Measurements: Females, length 4.7-5.4 mm, average (of 7) 5.1 mm; width 3.0-3.7 mm, average (of 7) 3.3 mm. Males, length 4.2-4.8 mm, average (of 26) 4.5 mm; width 2.6-3.1 mm, average (of 26) 2.9 mm. Thirteen others, of undetermined sex, were not measured.

Holotype ♂: USA. Texas, Brewster County, Big Bend National Park, Boquillas Canyon, 4 July 1972, R. L. Berry. USNM Type No. 72548.

Allotype ♀, paratypes 8 ♂, 2 ♀ (USNM); paratypes 13 ♂, 2 ♀, 6 sex unknown (OSUC);<sup>1</sup> paratypes 1 ♂, 1 ♀, 5 sex unknown (RLBC); paratypes 1 ♀, 3 ♂, 2 sex unknown (CASC). All with same data as the holotype.

In the preceding description, I have called certain punctures "oblique," because one side of the puncture appears elevated into a lunate or oblong granule and the other side is nearly flush with the surrounding surface. The oblique punctures of *C. triplehorni* are essentially identical to but less well developed than those of *C. inflatus* LeConte. Overall, the punctures and granules of *C. triplehorni* are small and result in a smoother surface than in other *Cryptadius* species. In *C. inflatus* and *C. sonoreae* the punctures and granules of the fronto-vertex are fused to a greater or lesser degree and form elongate rugae. In *C. sinuatus* and *C. tarsalis* the granules of the fronto-vertex are less well developed, although the punctures are large and distinct. Other differences include: 1) the presence of long setae (fig. 4) on the median portion of the epipleuron, these are absent or very short in other *Cryptadius*, although all the *Cryptadius* I have seen have long setae on the dorsal edge of the epipleuron (fig. 4, Ds); 2) the apicale is cylindrical and slender, and the penis is acutely pointed in *C. triplehorni* (fig. 3), but the apicale is dorso-ventrally compressed and the penis is blunt at the apex in all other *Cryptadius* seen (fig. 2, 8). *Cryptadius triplehorni* is also 0.1 to 2.4 mm shorter and is more strongly oval than other *Cryptadius*, according to their original descriptions (fig. 5-7).

All the specimens of *C. triplehorni* known to me were taken during a two-hour period after sundown, on sand deposits several feet above the level of the Rio Grande River. Nearby there was more solid, packed

<sup>1</sup> Abbreviations for depositories are those established by Arnett and Samuelson (1969).

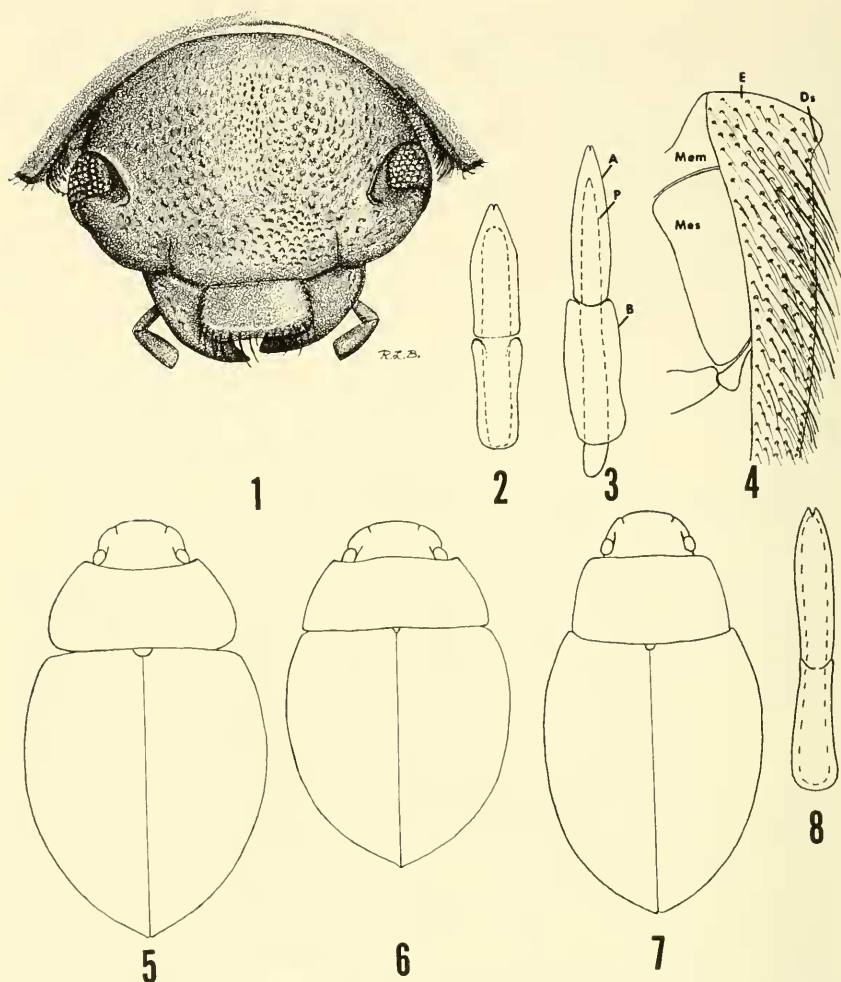


Fig. 1. *Cryptadius triplehorni*, frontal view of head and pronotum, showing surface sculpture of fronto-vertex. FIG. 2-3, 8. Ventral view of tegmen with internal penis represented by a broken line: 2. *C. inflatus*. 3. *C. triplehorni*. 8. *C. sonoreae*. FIG. 4. *C. triplehorni*, ventral view of anterior  $\frac{2}{3}$  of left epipleuron, showing long, dense setae and parts of adjacent sclerites. FIG. 5-7. Outline of head, prothorax, and elytra in dorsal view: 5. *C. inflatus*. 6. *C. triplehorni*. 7. *C. sonoreae*. Abbreviations: Mem, mesepimeron; Mes, metepisternum; E, epipleuron; Ds, row of setae on dorsal edge of epipleuron; a, apicale; b, basale; p, penis.

soil or silt, with grasses, rushes, and willows, but few or no *C. triplehorni* were found there and none were found on rocky terrain at higher and lower elevations. They were observed, sometimes in groups of 4 to 6, feeding on parts of dead cicadas lying on the sand. Presumably,

these cicadas were dismembered and partially eaten by birds during daylight hours. In numbers, *C. triplehorni* was by far the predominant tenebrionid species observed. The following genera (and number of specimens) of Tenebrionidae were taken at the same time: *Triorophus* (10), *Metoponium* (6), *Ulus* (6), *Hylocrinus* (1), *Blapstinus* (1), *Eleodes* (1), and *Telabis* (1).

The habitats of the species described by LeConte and Casey are in the maritime regions of Southern California (Casey, 1907). Presumably Blaisdell's species, described from Baja California, Mexico and nearby islands, are found in similar habitats, which may be characterized as having sand deposits not far from water. Due to this common habitat, it seems possible that *C. triplehorni* is a riverine "sand loving" species—the first on record. It is the first species described from the interior of the North American continent.

I take great pleasure in naming this species for Dr. Charles A. Triplehorn, who has done much to increase our knowledge of and encourage the study of the Tenebrionidae.

*Cryptadins sonora* Berry, new species

Male (holotype): Moderately shining, castaneous, oval (fig. 7), dorsum convex, length 5.8 mm, width 3.1 mm.

Head with genae only slightly entering eyes; punctures of moderate size, dense, and contiguous to confluent on fronto-vertex, tending to form concentric swirls of confluent punctures and rugulae. Pronotum with sides only slightly convex (fig. 7); front edge broadly, slightly concave; front angles abruptly rounded, not produced anteriorly; base slightly, broadly convex; basal angles obtuse, slightly rounded; base narrower than elytra at base; punctures moderately large, dense, round, and deep in middle  $\frac{1}{3}$ , becoming dense, oblique, and confluent laterally and forming longitudinal rugae between punctures. Pronotum with sparse, moderately long, erect setae on lateral edge; with short setae near lateral sides, and with small patch of moderately dense, short setae directly behind eyes, not reaching eyes. Prosternum with moderately dense, large, lunato-granulate punctures. Ventral pronotum punctato-rugose, sparsely clothed with short setae.

Elytra with sides strongly convex; with punctures distinct, dense, small, associated with rounded granules, shallower in lateral  $\frac{1}{3}$  and apical  $\frac{1}{2}$ ; with sparse, short, erect setae in lateral and apical  $\frac{1}{3}$ . Scutellum distinctly visible, rounded at apex and forming rounded notch at base of suture (fig. 7). Epipleuron with row of moderately long, golden-colored setae along outer edge and with sparse, short setae mesally; with a few subobsolete granules mesally. Mesosternum with median process just touching anterior margin of metasternum; with dense, moderately large punctures. Metasternal punctures moderately large, moderately dense, and shallow. Abdominal sterna sparsely, minutely punctate on sterna 1–3; punctures larger and dense, deep, and rounded on sterna 4 and 5. Tegmen (fig. 8) with apicale narrow, slightly dorso-ventrally flattened, acute, and distinctly notched at apex; dorsum horizontal in lateral view. Penis blunt at apex.

Female (allotype): Agrees with description of holotype except in size, color, and genitalia. Color dark castaneous. Length 6.8 mm, width 3.6 mm.

Measurements of paratypes: Desemboque ♀, length 6.5 mm, width 3.6 mm; San Pedro Bay ♂, length 5.5 mm, width 3.0 mm.

Holotype ♂: Desemboque, Sonora, Mexico, VIII-1-15-53, B. Malkin, CASC Type No. 11,785.

Allotype ♀ and 1 paratype ♀: Same data as holotype. Other paratype—1 ♂ San Pedro Bay, Sonora, Mexico, 3-IV-1953, P. H. Arnaud.

*Cryptadius sonorae* agrees with all previously described species, except *C. triplehorni*, in that it has moderately large punctures on the fronto-vertex. It may be most easily distinguished from the other known species by the fact that the pronotum is less strongly narrowed anteriorly and the base of the pronotum is narrower than the base of the elytra (fig. 7), whereas they are subequal in width in other species (fig. 5, 6). Also, the postocular setae of the pronotum are shorter and less conspicuous and the lateral setae of the pronotum are more conspicuous, by their erectness, than in the other species examined.

This is the first species known from the mainland of Mexico.

#### DISCUSSION

The previously known distribution of *Cryptadius* was in the Pacific coastal areas of Southern California and Baja California, whereas *C. triplehorni* is found in the Great Bend extension of the Mexican Highlands. Finding a species of *Cryptadius* so far inland and east of the continental divide negates any general supposition that the genus is restricted to Pacific coastal habitats and raises the question of what the actual geographic distribution is. I believe other riverine populations should exist, widely distributed in the southwestern United States and Mexico.

In 1923, Blaisdell summarily dismissed all of Casey's species with the statement "Casey had only *inflatus* and phases, with rounded basal angles, when he reviewed the genus." I do not feel that Blaisdell was justified in his synonymy of Casey's species with *inflatus* LeConte, but I make that statement only because of the flippant manner in which Blaisdell dismissed Casey's species. He may have been justified, but he gave no indication that he had given the synonymy a thorough study. A thorough review of the species of *Cryptadius* is in order before that synonymy can be accepted.

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